Beyond the ABCs Psychiatric Drugs

Information for Professionals

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Introduction

Drug Treatment for Psychiatric Disorders

Modern drug therapy has dramatically changed the treatment of patients with psychiatric disorders. Introduction of the antipsychotic drugs in the 1950s permitted many patients in mental hospitals to return to more normal lives in the community. Later, the anti-depressant drugs much improved the treatment of severe depression, with the newer ones having far fewer side-effects than those originally available. Another drug, lithium, is very effective in treating manic depression (bipolar disorder).

Psychiatric and other mood-altering drugs are often called psychoactive or psychotropic drugs. They are all drugs that can change or affect the way a person thinks, feels or acts. Tranquillizers, sleeping pills, narcotics, alcohol, tobacco, caffeine, marijuana, cocaine, opiates, Gravol®, and hallucinogens are all psychoactive drugs. Although many psychoactive drugs are frequently abused, most of the drugs discussed in this resource generally are not abused, as they don't produce euphoria or a "high" when taken.

A number of other drugs used to treat psychological problems, specifically the tranquillizers and sleeping pills, will be discussed only briefly. They are often abused and are included in a separate resource, Beyond the ABCs: Tranquillizers & Sleeping Pills.

Concerns About Treatment with Medications

The drugs used to treat psychiatric disorders can produce unwanted side-effects. These side-effects can be very serious, or they can merely be unpleasant. The exact nature of the side-effects and the degree of severity will depend upon many factors such as the drug; the dose; and the age, health and gender of the individual patient. These side-effects can be so serious that the attending physician may decide to stop treatment. The major advantage of some of the newer drugs is the lower incidence of side-effects. The side-effects of the individual drugs or groups of drugs will be discussed below.

The effects of drugs (other than lithium) used to treat psychiatric disorders include incoordination and impaired mental functioning. As a result, driving a car or operating machinery can be dangerous when taking them. If used together with alcohol, other depressant drugs, or anti-histamines (in cold, cough, and allergy remedies), these effects are greatly increased. Overdoses and death can result.

Other issues complicate the use of drugs in the treatment of psychiatric disorders. Some therapists feel that altering a person's mental state with drugs will interfere with treatment of the psychological problem. However, more and more evidence shows that imbalances of brain chemicals do occur in psychiatric disease and that correcting them with drugs can be an important part of therapy.

Another concern is that psychiatric diagnosis is far from being an exact science. However, progress continues in an effort to better define the various disorders. The terminology and criteria currently employed in Canada are described in the DSM-IV-TR (Diagnostic & Statistical Manual of Mental Disorders Text Revision) of the American Psychiatric Association (2000).

Dual Diagnosis

Knowledge of psychiatric illness and the drugs used to treat it has become increasingly important to workers in the substance abuse field. It is now recognized that up to 30% of alcoholics and 50% of other drug abusers also have another psychiatric diagnosis. Treating people with these so-called "dual diagnoses" can be very complex and difficult.

Common psychiatric disorders that occur along with alcohol and drug problems include psychotic illness such as schizophrenia, a major depression, manic depression, or a disabling anxiety disorder. In drug abusing clients, the psychiatric illness may result from or be complicated by the drug abuse. As a result, special programs are being developed to meet the needs of people with dual diagnosis. These include hospital-based programs such as the Addiction Centre at the Foothills Hospital in Calgary and 12-step, Alcoholics Anonymous-type groups referred to as "Double Trouble" groups in the community. Addiction workers should be able to recognize these clients, refer

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them for additional help if necessary, and also be involved in their follow-up.

Counsellors, who usually focus on helping their clients to stop using drugs, must adjust to the fact that psychiatric patients must use their treatment medications in order to function. This Beyond the ABCs is an attempt to provide addiction workers with clear information about psychiatric drugs.

Drugs Used to Treat Psychosis

The term psychosis is generally used to describe a serious disorder of mental functioning. Drug therapy can dramatically improve the function of a person with a psychosis. One criterion of psychosis is being out of touch with reality. Symptoms, which can include hallucinations, delusions, and abnormal thinking and mood, will usually resolve with adequate drug treatment.

While the goal of addictions treatment is to discourage most drug-abusing clients from taking drugs, psychotic clients often need to be strongly encouraged to take their prescribed medication. Their illness can prevent them from understanding the value of these drugs or being capable of taking them on a regular basis. Injections of long-acting drugs can be useful in these cases.

Drugs

The phenothiazine drugs were the first discovered and are still widely used to treat psychosis. They include: chlorpromazine (Largactil®), levomeprazine (Nozinan®), fluphenazine (Moditen®), perphenazine (Trilafon®), trifluoperazine (Stelazine®), thioridazine (Mellaril®) and many others.

Other drugs used to treat psychosis include haloperidol (Haldol®), thiothixine (Navane®), and loxapine (Loxapac®). Newer, very effective drugs are quetiapine (Seroquel®), olanzapine (Zyprexia®) and risperidone (Risperdal®). Clozapine (Clozaril®) is a drug that is sometimes useful for resistant cases of schizophrenia but has serious toxic effects upon the blood-forming tissues of the body; it is used only under strict medical supervision.

Antipsychotic drugs are usually taken orally in the form of a pill or capsule. Since some people have difficulty remembering to take their medication, they can receive it by injection in a long-acting form given every three or four weeks. Examples of drugs available in this form include: fluphenazine decanoate (Modecate®), fluphenazine enanthate (Moditen Enanthate®), flupenthixol decanoate (Fluanxol Depot®), and haloperidol decanoate (Haldol LA®). In some publications, the antipsychotic drugs are referred to as major tranquillizers because they are used to calm or tranquillize those with "major" psychiatric illness. Drugs such as Valium® and Librium®, used to treat anxiety in less severe illnesses, are then called minor tranquillizers. More commonly, the word tranquillizer is used with no qualification to describe drugs of the Valium and Librium type. Because the word tranquillizer is so imprecise, it should no longer be used for drug classes that are well defined.

Medical Use

An important use of the antipsychotic drugs is to treat chronic psychiatric illnesses such as schizophrenia. Although long-term drug treatment may be necessary, it is always continued with caution because very serious side-effects can occur. To minimize side-effects, patients are treated with the lowest dose that will control their illness.

Antipsychotic drugs are also used in less chronic conditions where psychosis occurs, such as in the short-term treatment of psychoses resulting from the use of cocaine or a hallucinogen. In such cases, the drugs are often given by injection and rapidly cause deep sleep during which the psychosis inducing chemicals are eliminated from the body; the mechanism of action is not necessarily one of treating the psychosis but of gaining time for elimination to take place. These drugs are also used to treat hallucinations that occur during alcohol withdrawal (alcoholic hallucinosis) and symptoms of psychosis resulting from infection and other diseases. In acute situations, antipsychotic drugs are used to control psychotic symptoms such as agitation, excitement, and violent behaviour as well as manic behaviour associated with manic depression. In these cases, the sedating properties of the drugs are vitally important.

These drugs are sometimes prescribed for people who are not psychotic to calm them down or help them sleep.

Side-Effects

Antipsychotic drugs greatly enhance the effects of other drugs that depress the nervous system. The resulting poor coordination and impaired mental functioning are of particular concern in people who abuse alcohol, tranquillizers, and sleeping pills. This effect also applies to those taking pain killers ,antihistamines, and cold remedies, whether prescribed by a doctor or bought over-the-counter in a drugstore. Driving a car or operating machinery can become very dangerous when these drugs are taken together. Even when taken alone, antipsychotic drugs can impair these abilities particularly in the early stage of drug treatment.

Less serious side-effects of the antipsychotic drugs may include fainting, palpitations, nasal stuffiness, dry mouth, blurred vision, constipation, and, in men with prostate problems, difficulty urinating. Skin reactions can occur and a sunscreen should be used when someone who is taking these drugs is exposed to the sun.

Antipsychotic drugs can cause serious side-effects on the nervous system. A syndrome very similar to Parkinson's disease can occur, with symptoms such as slow movements, rigidity of the muscles, tremor, and a fixed mask-like face. This syndrome, called Parkinsonian syndrome or

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Parkinsonism, and the muscle spasms and restlessness that can also be side-effects of the antipsychotic drugs are treated with some of the drugs used to treat Parkinson's disease. These drugs include benztropine (Cogentin®), trihexyphenidyl (Artane®), procyclidine (Kemadrin®), diphenhydramine (Benadryl®), and biperiden (Akineton®). It is important to note that only the anticholinergic drugs used to treat Parkinson's disease can be used with antipsychotic drugs, the other drugs used to treat Parkinson's disease may make the psychosis worse than before.

Another possible very serious side-effect of antipsychotic drug use is tardive dyskinesia. It appears only after months or years of treatment. Involuntary, repetitive movements of the mouth, tongue or jaw occur. The arms, legs and body can also be involved. Prevention requires frequent examination by a doctor so that the dose can be reduced or the drug discontinued if early signs appear. The anti-Parkinsonism drugs listed above typically worsen the condition. No good treatment exists and some people are permanently affected.

Neuroleptic malignant syndrome is a rare, but nonetheless life-threatening side-effect of antipsychotic drugs. It resembles very severe Parkinsonism with stupor, fluctuating blood pressure and very high temperature. It requires hospital treatment. Other dangerous, but rare side-effects include degeneration of the retina of the eye and decreased levels of important immune cells.

The side-effects of antipsychotic drugs clearly require that people taking them be regularly followed and assessed by their doctor. Despite their numerous side-effects, however, antipsychotic drugs, when used appropriately, greatly improve quality of life for many people with serious psychotic illness.

Drugs Used to Treat Manic Depression (Bipolar Disorder)

People with manic depression have alternating periods of mania and depression and normal mood. During the manic phase, they are overactive, are over-ambitious, have difficulty sleeping, may hallucinate, and may exhibit aggressive behaviour and a violent temper. They often spend large amounts of money or suddenly engage in risky activities. Over a period of weeks or months, they may then become very depressed and have great difficulty functioning because of depressed mood and lack of energy. Individuals with bipolar depression most commonly seek help during their depressed phase. Creative individuals such as writers or artists may enjoy higher productivity during the manic phase and may resist treatment during these periods. Drug treatment can level out the peaks and valleys and allow these people to function quite normally.

Drugs

Lithium carbonate (Carbolith®, Duralith®, Lithane®) is the drug most commonly used to treat manic depression. It differs from other drugs used to treat psychiatric disorders since it has no effects on the mind in normal people. It is very similar chemically to ordinary table salt (sodium chloride).

Lithium is taken in capsule or tablet form. It is prescribed both by dosage and according to the level of the drug in the blood. The concentration that is currently considered to be effective and acceptably safe is between 0.75 and 1.25 mg per litre. Because the toxic dose of lithium is rather close to the usual therapeutic dose, blood levels should be monitored closely, at least initially.

Other less commonly used drugs, include carbamazepine (Tegretol®), and valproic acid (Depakene®).

Medical Use

As the major drug used to treat people with manic depression, lithium is of particular importance in helping to prevent the mood swings. It is also useful in larger doses in the treatment of the manic phase of the illness.

People with manic depression are also treated with antipsychotic drugs (see above), occasionally with a benzodiazepine (Librium®, Valium® group of drugs) during the manic phase and with antidepressant drugs (see below) during the depressive phase.

Because of side-effects and a preference for feeling "high" during the manic phase, people with the illness often require considerable encouragement to continue taking the maintenance dose of lithium.

Side-Effects

The most common early side-effects of lithium include upset stomach and bowels, nausea, dizziness, muscle weakness, and a dazed feeling. These effects often disappear with regular use. More lasting side-effects include fine tremor of the hands, fatigue, thirst, and excessive urination. Patients may be bothered by the thirst and excessive urination and try to reduce trips to the bathroom by reducing the intake of fluids. This practice leads to reduction in body water with subsequent increase in blood lithium levels and increases the probability of side-effects. Lithium can also cause abnormal kidney function and decrease thyroid gland function. Significant weight gain can occur and acne can be a problem, particularly in young people.

In addition to these side-effects, more serious toxic effects can develop if the dose of lithium is too high for the particular patient. Lithium cannot be used safely if blood testing is not done regularly because there is a small difference between the dose that is needed to treat manic depression and the dose that is toxic.

Early signs of toxicity include sluggishness, drowsiness, coarse tremors, muscle twitching, loss of

appetite, vomiting, and diarrhea. These are signs that the dose must be decreased because higher blood levels can cause convulsions, coma, and death.

Despite the necessity for careful supervision of a person taking lithium, including regular tests of blood levels, it is a valuable drug for a majority of people with manic depression. People with serious disease need not fear taking this drug when under the care of a doctor.

Drugs Used to Treat Depression

Depression is one of the most common of the major mental disorders. Unfortunately, it is often not recognized and remains under-treated. Severe depression should not be confused with normal grief, sadness, and disappointment or with the distress and unhappiness that can occur with other medical illness.

A person suffering from clinical depression has feelings of intense sadness and despair, slow thinking, and poor concentration. Their thoughts are usually very negative, they worry excessively, and they are often agitated. Physical changes include difficulty sleeping (insomnia) or sleeping too much, loss of appetite and weight loss (or overeating), and decreased energy and sexual drive. Thoughts of suicide (or, more seriously, a concrete suicide plan) are signs of a possible need for immediate intervention.

A significant problem for an addiction worker assessing a client is the fact that drugs of abuse classed as depressants, such as alcohol, can cause clinical depression. Therefore, a depressed client that stops drinking may no longer be depressed. Usually a definite diagnosis of major depression is not made unless an alcoholic has been abstinent for four to six weeks. Similarly, depression can occur on withdrawal from stimulant drugs such as cocaine, amphetamines, etc. Monitoring and non-drug treatment are important during this time, as the risk of suicide is present as long as the depression continues.

In considering drug treatment, it is important to realize that, because antidepressant drugs take two to three weeks or longer to be effective, the person may be well by that time. Since antidepressant drugs can add to the effects of alcohol, they are not usually prescribed if the person continues to drink.

Another concern is that people who are already abusing alcohol or other drugs may request antidepressants because they are looking for another "easy" drug answer to their problems. Obviously, considerable clinical judgment must be exercised in deciding to give an antidepressant to these people.

Drugs

Today, a number of groups of drugs are used to treat depression. Many belong to the tricyclic group and include amitriptyline (Elavil®), amoxapine (Asendin®), clomipramine (Anafranil®), desipramine (Norpramin®, Pertofrane®), doxepin (Sinequan®), imipramine (Tofranil®), nortriptyline (Aventyl®), and trimipramine (Surmontil®). Maprotiline (Ludiomil®) is a similar drug.

The MAO (monoamine oxidase) inhibitors are another group of antidepressant drugs that have been available for many years. They include tranylcypromine (Parnate®), and phenelzine (Nardil®). Moclobemide (Manerix®) is a newer type of MAO inhibitor.

Most of the newer, currently very popular antidepressant drugs belong to the SSRI (selective serotonin re-uptake inhibitor) group. They include fluoxetine (Prozac®), fluvoxamine (Luvox®), sertraline (Zoloft®), and paroxetine (Paxil®). Trazodone (Deseryl®), and nefazodone (Serzone®) are similar drugs. Venlafaxine (Effexor®) and citalopram (Celexa®) are members of a new class of drugs that inhibit the re-uptake of both serotonin and noradrenaline but do not have the side-effects of the tricyclics.

Medical Use

As the name implies, the main use of the antidepressant drugs is to treat clinical depression. The tricyclic drugs continue to be widely used because they are effective and inexpensive compared to the SSRIs and are often used in patients who can tolerate the side-effects. The newer SSRIs are becoming increasingly popular because generally they have fewer side-effects, often need to be taken only once a day, and they are less dangerous if an overdose is taken. The MAO inhibitors, although effective, have restricted use because of side-effects (see below).

Various antidepressant drugs are also used in treating chronic pain, severe anxiety syndromes such as panic attacks, obsessive-compulsive disorders, and bulimia. They have been tried with limited success in the treatment of alcoholism. In particular, the tricyclic antidepressants are often used to treat pain, particularly that of nervous origin; they are sometimes referred to as the tricyclic analgesics. One should not jump to the conclusion a client is depressed simply on the basis of a history of tricyclic use.

Side-Effects

As with the antipsychotic drugs, driving a car or operating machinery can be dangerous when taking antidepressants, particularly if any other drugs are also taken.

Antidepressant drugs cause a wide range of side-effects that often determine which drug is prescribed for a particular person. The three groups of antidepressants-the tricyclics, the MAO inhibitors and the SSRIs-all have somewhat different side-effects.

Common side effects of tricyclic use include dry mouth, constipation, blurred vision, difficulty urinating, increased sensitivity to the sun, dizziness after standing up quickly, weight gain, increased sweating, and drowsiness. Many of these side-effects disappear after a few days of taking the drug. Less common side-effects include confusion, agitation, memory impairment, palpitations, and impotence.

People taking the older MAO inhibitors must avoid certain foods to avoid severe attacks of very high blood pressure. Vascular headache often occurs and death is theoretically possible.

Eating foods such as cheese and wine while taking MAO inhibitors can result in a dangerous increase in blood pressure. These foods contain tyramine, a naturally occurring amino acid found in fermented foods which has stimulant properties. Tyramine does not normally enter the circulation when eaten because it is destroyed by the enzyme monoamine oxidase in the intestinal tract; however MAO is inactivated by MAO inhibitor antidepressants. As a result, these drugs are not used frequently and are reserved for people who do not respond to other drugs. The MAO inhibitors also cause a number of less serious side-effects. The new MAO inhibitor moclobemide (Manerix®) requires less dietary restriction than previous members of this group.

The SSRI group of drugs clearly causes fewer side-effects than the other antidepressants. Insomnia and nervousness can occur particularly with Prozac®; yet others, such as Zoloft®, can cause drowsiness. Nausea, diarrhea, headache, weight loss, and difficulty having an orgasm are all possible side-effects. The related drug, Deseryl®, can cause a sustained erection (priapism) requiring urgent medical treatment. This is a very rare side-effect.

Antidepressant overdoses are not uncommon and can be fatal. Seriously depressed patients are at risk of taking an overdose in an attempt to commit suicide, particularly during the early recovery stage as their improved energy level permits action. Therefore, prescriptions are often limited to no more than a week's supply. The SSRI antidepressants are much less toxic if an overdose is taken.

Drugs Used to Treat Anxiety

The treatment of anxiety is a challenge to any therapist. Often anxiety is normal and can be very useful as it can motivate us to take action. Excessive anxiety can, however, be very disruptive and prevent normal function. Except in severe cases, the first choice for treating anxiety often involves non-drug methods such as exercise, relaxation therapies, stress management, and counselling. In most cases, if a drug is used, it is only as an adjunct to these techniques.

In cases of very serious anxiety, referred to in psychiatry as "generalized anxiety disorder (GAD), and panic disorder," drug treatment can be very helpful. Drugs belonging to the benzodiazepine group, listed below, are used most commonly.

Drug treatment for anxiety is particularly difficult when dealing with someone who is dependent on alcohol or other drugs. Because the benzodiazepines can cause tolerance and physical dependence, they should be used with great caution. These people will often just change their dependency to the benzodiazepines and continue to have a drug problem that disrupts their life.

Also, as with the antidepressant drugs, a drug-free period is usually recommended before the treatment for anxiety is started in alcoholics and other drug abusers. Their anxiety may be caused in large part by withdrawal from alcohol or other drugs or may be a direct effect of taking drugs such as cocaine or LSD. Anxiety may no longer be a problem once withdrawal is over and after a number of drug-free weeks. Also, anxiety often decreases considerably when problems at home, with friends, and at work have been dealt with.

The treatment of specific anxiety disorders with antidepressants and other drugs has been omitted because of the complexity of the subject, because these newer therapies are less well established, and because these are not drugs of abuse.

Drugs

In treating anxiety, benzodiazepine drugs are used both as tranquillizers (anti-anxiety agents) and as sleeping pills. Those used as tranquillizers include chlordiazepoxide (e.g., Librium®), diazepam (e.g., Valium®), oxazepam (e.g., Serax®), lorazepam (Ativan®), alprazolam (Xanax®), clorazepate (Tranxene®), and bromazepam (Lectopam®).

Benzodiazepines used mainly as sleeping pills include: flurazepam (Dalmane®), triazolam (Halcion®), temazepam (Restoril®), and nitrazepam (Mogadon®). Clonazepam (Rivotril®) differs as it is also used to treat epilepsy.

Buspirone (Buspar®) is a new antianxiety drug and zopiclone (Immovane®) is a sleeping pill of a new class of drugs. Both may cause fewer side-effects than the benzodiazepines, and have a lower abuse potential.

For more information about antianxiety drugs, see the AADAC resource Beyond the ABCs: Tranquillizers & Sleeping Pills.

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Drugs Used to Treat Psychosis	Generic Name	Trade Name
	chlorpromazine	Largactil®
	methotrimeprazine	Nozinan®
	fluphenazine	Moditen®
	perphenazine	Trilafon®
	trifluoperazine	Stelazine®
	thioridazine	Mellaril®
	haloperidol	Haldol®
	thiothixine	Navane®
	loxapine	Loxapac®
	clozapine	Clozaril®
	risperidone	Risperdal®
	flupenthixol	Fluanxol®
	fluspirilene	Imap®
	olanzapine	Zyprexa®
	pipotiazine	Piportil L4®
	pericyazine	Neuleptil®
	mesoridazine	Serentil®
	prochlorperazine	Stemetil®
	quetiapine	Seroquel®
	pimozide	Orap®
	fluphenazine decanoate	Modecate®
	fluphenazine enanthate	Moditen Enanthate®
	flupenthixol decanoate	Fluanxol Depot®
	haloperidol decanoate	Haldol LA®
Manic Depression	lithium carbonate	Carbolith®
		Duralith®
		Lithane®
	carbamazepine	Tegretol®
	valproic acid	Depakene®
Depression		
a) Tricyclics	amitriptyline	Elavil®
	amoxapine	Asendin®
	clomipramine	Anafranil®
	desipramine	Norpramin®
		Pertofrane®
b) MAO Inhibitors	doxepin	Sinequan®
	imipramine	Tofranil®
	nortriptyline	Aventyl®
	trimipramine	Surmontil®
	maprotiline	Ludiomil®
c) SSRIs	tranylcypromine	Parnate®
	phenelzine	Nardil®
	moclobemide	Manerix®
	fluoxetine	Prozac®
	fluvoxamine	Luvox®
	sertraline	Zoloft®
	paroxetine	Paxil®
	trazodone	Desyrel®
	nefazodone	Serzone®
	venlafaxine	Effexor®
	citalopram	Celexa®

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Anxiety

a) benzodiazepines used as tranquillizers	chlordiazepoxide	Librium®
	diazepam	Valium®
	oxazepam	Serax®
	lorazepam	Ativan®
	alprazolam	Xanax®
	clorazepate	Tranxene®
	bromazepam	Lectopam®
b) benzodiazepines used as sleeping pills	flurazepam	Dalmane®
	triazolam	Halcion®
	temazepam	Restoril®
	nitrazepam	Mogadon®
	clonazepam	Rivotril®
c) non-benzodiazepine sleeping pills	buspirone	Buspar®
	zopiclone	Imovane®

Additional Reading

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For more information about substance abuse and available treatment services, contact your local AADAC office (check your local telephone directory for listing).

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